

# MPCA CITIZEN WATER MONITORING

CLEAN WATER, ONE VOLUNTEER AT A TIME



# Overview

- ❖ History and background
- ❖ Using Citizen Monitoring Data
- ❖ Challenges and opportunities





# Citizen Science at the MPCA

- ❖ Contributes valuable data
- ❖ Citizen reach extends far beyond MPCA capacity
- ❖ Program longevity and consistency broadens MPCA's knowledge and strengthens actions



# MPCA Citizen Science Opportunities

- ❖ 1973 - Citizen Lake Monitoring Program (CLMP)
- ❖ 1998 - Citizen Stream Monitoring Program (CSMP)



Over **1,300** volunteers  
monitoring more than  
**1,800** sites statewide!



# Volunteer Duties

- ❖ Monitor lake and stream **water clarity**
- ❖ Submit data annually
- ❖ MPCA provides training and equipment



# Our Volunteer Community

## Who can monitor

- ❖ Anyone who lives or works near a lake or stream!
- ❖ Families & retirees

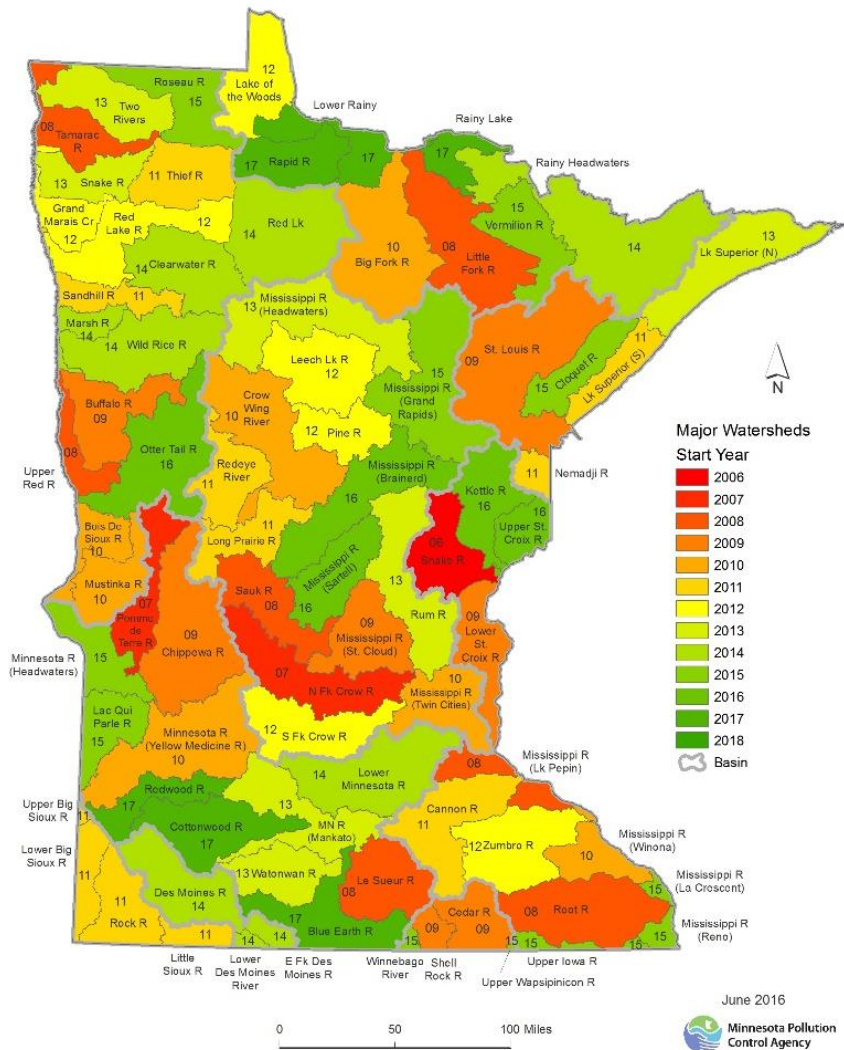
## Why volunteers monitor

- ❖ Concern about water quality
- ❖ Curious about their lake/stream
- ❖ Contribute to our understanding





# MPCA's Watershed Monitoring Approach



Goal: Evaluate condition to inform management actions

- Examine water quality
- Identify stressors
- Inform watershed restoration and protection strategies (WRAPS)
- Track trends (effectiveness monitoring)

Features:

- 10-year cycle
- Integrate agency, **citizen**, local efforts

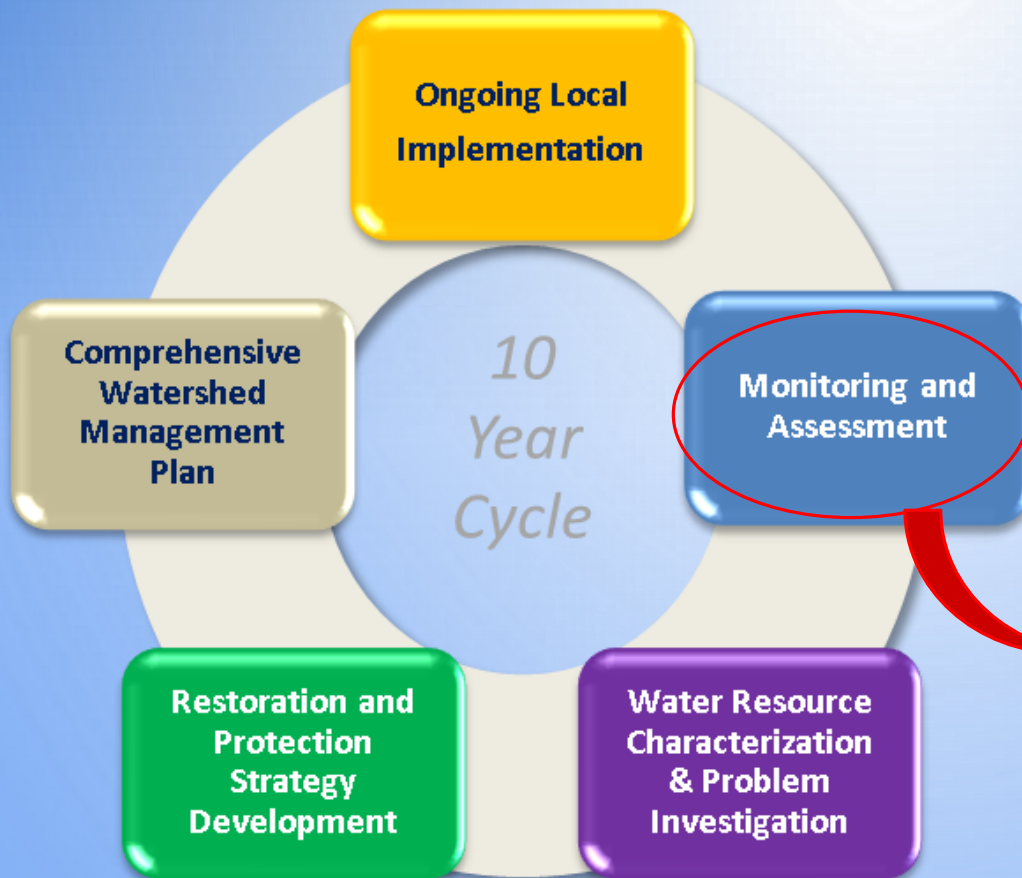
# Citizen Monitoring & the Watershed Approach

Minnesota Water  
Management  
Framework





# Citizen Monitoring & the Watershed Approach



- ❖ MPCA Biological & Chemistry monitoring 2 of every 10 years
- ❖ Citizen Secchi monitoring during “off” years

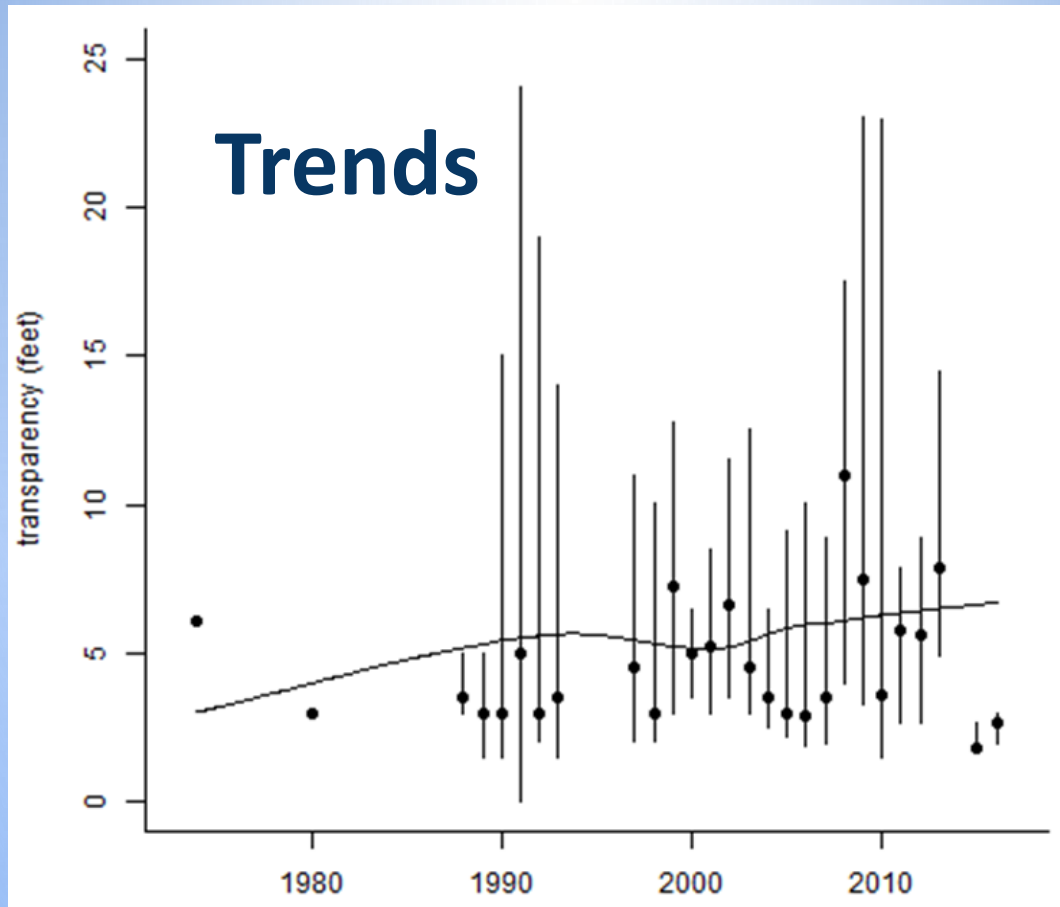
# Using Citizen Monitoring Data

- ❖ Assess compliance with state water quality standards
- ❖ Identify and track trends in Secchi water clarity





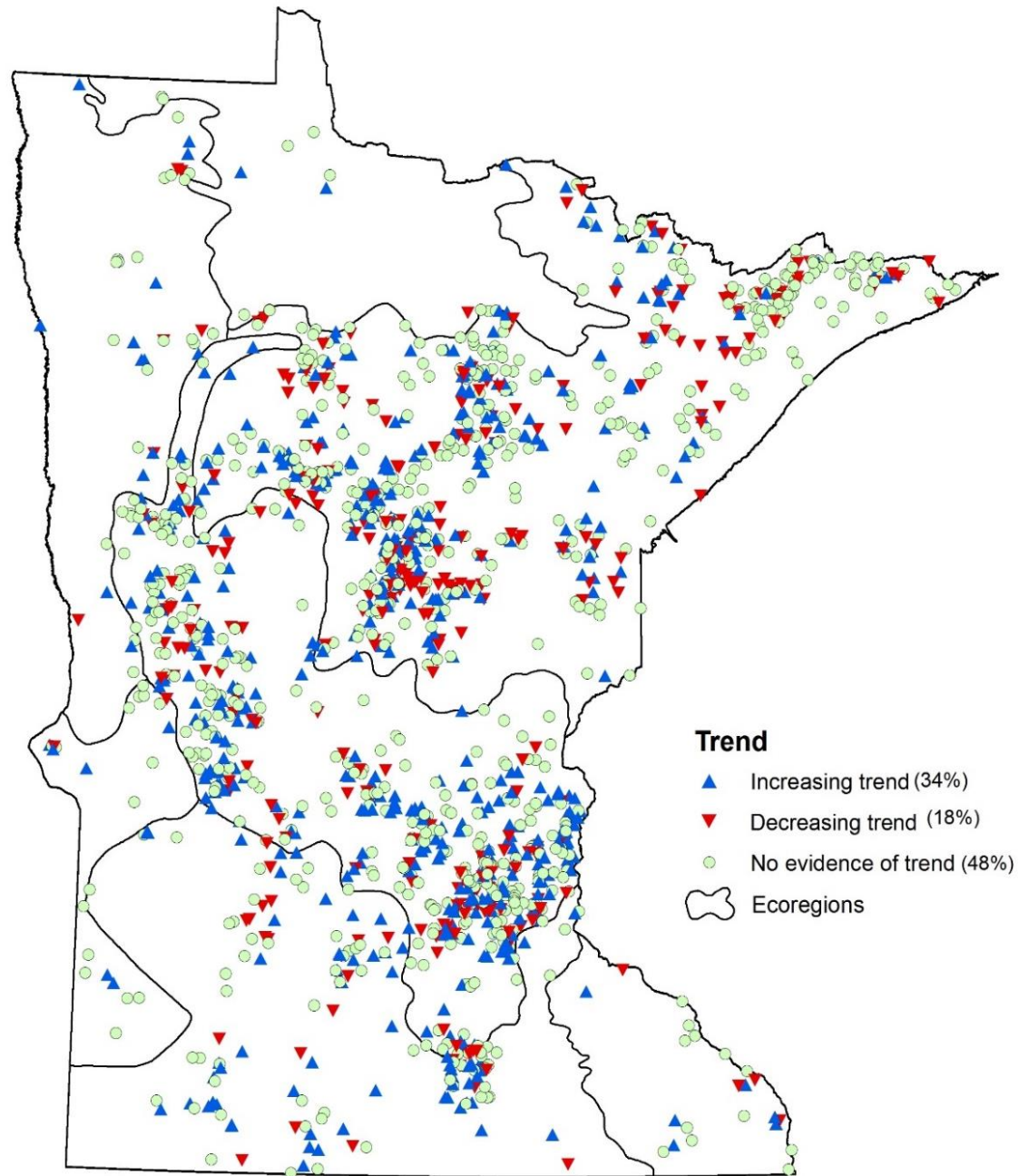
# Using Citizen Monitoring Data



Track **increases** or **decreases** in water clarity over time

# Using Citizen Monitoring Data

## Lake Transparency Trends (1,659 lakes) 1972 - 2016





# Using Citizen Monitoring Data

## Water Quality Assessments





# Challenges and Opportunities

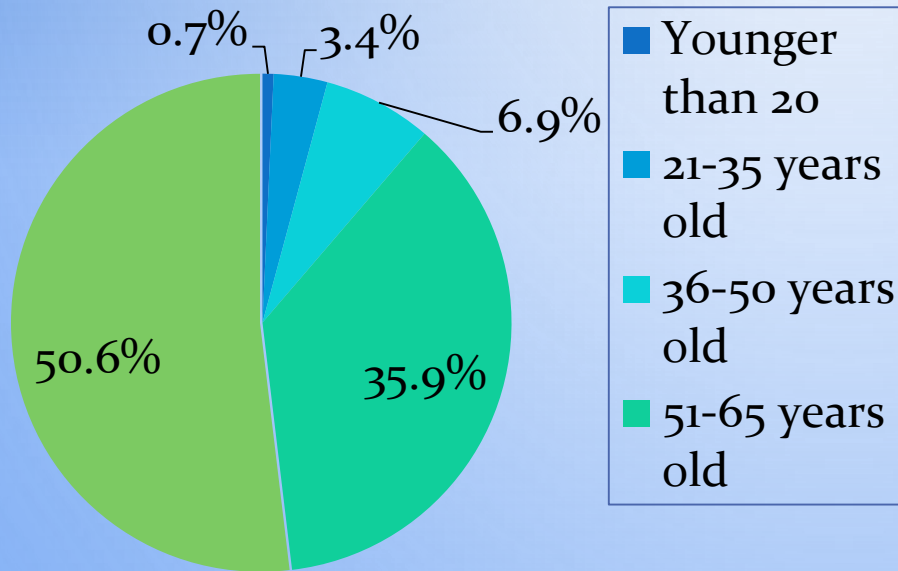
- ❖ Aging volunteers
- ❖ Retention



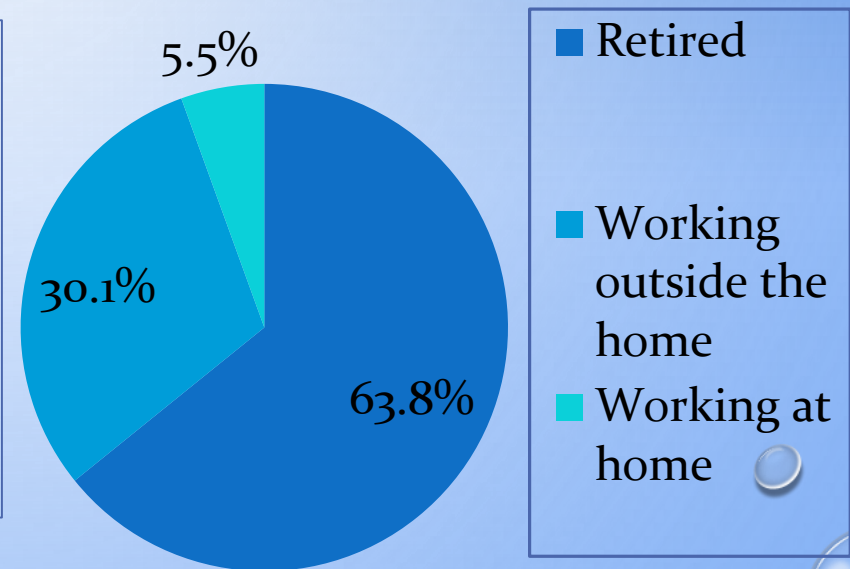


# Challenges and Opportunities: Aging volunteers

## Age



## Working Status



# Challenges and Opportunities: Aging volunteers

Attract & recruit younger participants

- Social media promotion
- Mobile App development?





# Challenges and Opportunities: Retention

Current monitoring options:

Basic lake & stream Secchi monitoring

CLMP+

Lake Ice Reporting



Other opportunities?

# Challenges and Opportunities: Retention

Recent new approaches:



- ❖ Secchi Social gatherings
- ❖ Reach out to volunteers not actively monitoring



# Challenges and Opportunities: Retention

Developing new leadership opportunities:



- ❖ Encouraging local involvement of CMP volunteers in other stages of Watershed Approach
- ❖ Citizen Advisory Council?

# Summary:

- ❖ MPCA Citizen Monitoring has a long successful history
- ❖ Success hinges on integration within MPCA Watershed Approach & data use within this framework
- ❖ Challenges & opportunities exist moving forward

THANK YOU!

QUESTIONS/COMMENTS:

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Streams

